

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A ~~diesel fuel cetane improver, the cetane improver additive~~ comprising:

beta-carotene; and  
2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline.

2. (Currently Amended) A ~~diesel fuel cetane improver, the cetane improver additive~~ comprising:

a ~~cetane improving additive~~ first compound selected from the group consisting of carotenes, carotenoids, carotene derivatives, carotene precursors, carotenoid derivatives, carotenoid precursors, long chain olefinic compounds, and mixtures thereof; and

a stabilizing compound that inhibits oxidation of the first compound ~~cetane improving additive~~.

3. (Currently Amended) The ~~diesel fuel cetane improver additive~~ of claim 2, wherein the stabilizing compound comprises 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline.

4. (Currently Amended) The ~~diesel fuel cetane improver additive~~ of claim 2, further comprising a plant oil extract and a thermal stabilizer.

5. (Currently Amended) The ~~diesel fuel cetane improver additive~~ of claim 4, wherein the plant oil extract ~~comprises~~ is selected from the group consisting of an oil extract of a plant of the *Leguminosae* family, an oil extract of barley, chlorophyll, and combinations thereof.

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6. (Cancel)

7. (Cancel)

8. (Currently Amended) The diesel fuel ~~cetane improver~~ additive of claim 4, wherein the thermal stabilizer is selected from the group consisting of ~~comprises~~ jojoba oil, an ester of a C20-C22 straight chain monounsaturated carboxylic acid, and combinations thereof.

9. (Cancel)

10. (Currently Amended) The diesel fuel ~~cetane improver~~ additive of claim 4, wherein the plant oil extract comprises oil extract of barley and the thermal stabilizer comprises jojoba oil.

11. (Cancel)

12. (Currently Amended) The diesel fuel ~~cetane improver~~ additive of claim [[11]]2, wherein the further comprising a diluent [[is ]]selected from the group consisting of toluene, gasoline, diesel fuel, jet fuel, and mixtures thereof.

13. (Cancel)

14. (Currently Amended) The diesel fuel ~~cetane improver~~ additive of claim [[13]]2, wherein the further comprising an oxygenate [[is ]]selected from the group consisting of methanol, ethanol, methyl tertiary butyl ether, ethyl tertiary butyl ether, [[and ]]tertiary amyl methyl ether, and mixtures thereof.

15. (Cancel)

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16. (Currently Amended) The ~~diesel fuel~~ ~~cetane improver~~ additive of claim 1, wherein a ratio of grams of beta-carotene to grams of 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline in the additive is from about 20:1 to about 1:1.

17. (Currently Amended) The ~~diesel fuel~~ ~~cetane improver~~ additive of claim 1, wherein a ratio of grams of beta-carotene to grams of 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline in the additive is from about 15:1 to about 5:1.

18. (Currently Amended) The ~~diesel fuel~~ ~~cetane improver~~ additive of claim 1, wherein a ratio of grams of beta-carotene to grams of 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline in the additive is about 10:1.

19. (Currently Amended) The ~~diesel fuel~~ ~~cetane improver~~ additive of claim 2, further comprising 2-ethylhexyl nitrate.

20. (Currently Amended) An additized ~~diesel fuel~~, ~~the diesel fuel~~ comprising a base fuel and a fuel additive ~~for use in improving cetane number~~, ~~the fuel additive~~ comprising:  
beta-carotene; and  
2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline.

21. (Currently Amended) An additized ~~diesel fuel~~, ~~the diesel fuel~~ comprising a base ~~diesel~~ fuel and a fuel additive ~~for use in improving cetane number~~, ~~the fuel additive~~ comprising:  
a ~~cetane improving~~ first additive selected from the group consisting of carotenes, carotenoids, carotene derivatives, carotene precursors, carotenoid derivative, carotenoid precursors, long chain olefinic compounds, and mixtures thereof; and  
a stabilizing compound that inhibits oxidation of the ~~cetane~~ improving first additive.

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22. (Currently Amended) The additized ~~diesel~~ fuel of claim 20, wherein the fuel comprises from about 0.00025 g to about 0.05 g beta-carotene per 3785 ml additized ~~diesel~~ fuel and from about 0.000025 g to about 0.005 g 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline ethoxyquin per 3785 ml additized ~~diesel~~ fuel.

23. (Currently Amended) The additized ~~diesel~~ fuel of claim 20, wherein the fuel comprises from about 0.00053 g to about 0.021 g beta-carotene per 3785 ml additized ~~diesel~~ fuel and from about 0.000053 g to about 0.0021 g 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline ethoxyquin per 3785 ml additized ~~diesel~~ fuel.

24. (Cancel)

25. (Cancel)

26. (Currently Amended) A gasoline additive gum inhibitor for gasoline, the gum inhibitor comprising: 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline.

27. (Currently Amended) A gasoline blend composition comprising a base gasoline and 2,2,4 trimethyl-6 ethoxy-1,2 dihydroquinoline the gasoline additive of claim 26.

28. (Currently Amended) The gasoline composition blend of claim 27, wherein the 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline is present in the gasoline composition blend at a concentration of about 50 to 1000 ppm.

29. (Currently Amended) The gasoline composition blend of claim 27, wherein the 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline is present in the gasoline composition blend at a concentration of about 100 to 500 ppm.

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30. (Currently Amended) The gasoline ~~composition~~ blend of claim 27, wherein the 2,2,4-trimethyl-6-ethoxy-1,2-dihydroquinoline is present in the gasoline ~~composition~~ blend at a concentration of about 200 to 400 ppm.

31. (New) The diesel fuel additive of claim 1 further comprising 2-ethylhexyl nitrate and toluene.

32. (New) The fuel additive of claim 31, wherein the beta-carotene comprises a mixture of cis and trans isomers of beta-carotene.

33. (New) The additized diesel fuel of claim 20 wherein the additive further comprises 2-ethylhexyl nitrate and toluene.